

TABLE I
RQ1. NUMBER OF NFP-IMPROVING COMMITS IN EACH REPOSITORY (% OF TOTAL COMMITS IN REPOSITORY). REPOSITORIES WITH ZERO NFP-IMPROVING COMMITS ARE NOT LISTED.

App Name	Execution Time Commits	Memory Commits	Bandwidth Commits	Frame Rate Commits	Total NFP commits
Android CUPS Print	1 (0.36%)	1 (0.36%)	1 (0.36%)	0	3 (1.09%)
Apple Flinger	1 (0.22%)	0	0	0	1 (0.22%)
Calculator	11 (0.96%)	1 (0.09%)	0	1 (0.09%)	13 (1.14%)
Call Recorder	0	2 (0.13%)	0	1 (0.06%)	3 (0.19%)
DNS66	4 (1.17%)	8 (2.34%)	1 (0.29%)	0	10 (2.93%)
F-Droid	56 (0.89%)	15 (0.24%)	9 (0.15%)	6 (0.10%)	85 (1.38%)
Firefox	10 (0.35%)	4 (0.15%)	2 (0.08%)	2 (0.08%)	18(0.66%)
Frozen Bubble	1 (0.64%)	3 (1.91%)	1 (0.64%)	0	3(1.91%)
G-Droid	2 (0.32%)	0	2 (0.32%)	0	3(0.48%)
Gadgetbridge	9 (0.17%)	17 (0.33%)	0	2 (0.04%)	28 (0.62%)
Mi Mangu Nu	6 (0.33%)	6 (0.33%)	0	0	12 (0.66%)
NewPipe	24 (0.41%)	16 (0.26%)	10 (0.17%)	3 (0.05%)	50 (0.82%)
Manual Total	125	73	26	15	229
AntennaPod	10	7	0	1	18
Avare	0	3	0	0	3
CalanderNotification	0	1	0	0	1
EasyToken	0	1	0	0	1
Gigaget	0	1	0	0	1
Glt-companion	0	3	0	0	3
KernelAuditor	0	4	0	0	4
Koreader	5	11	0	0	15
Lighting-Browser	2	13	0	0	15
LnWallet	0	1	0	0	1
OpenBikeSharing	0	1	0	0	1
OpenFoodFacts	0	1	0	0	1
OpenMw	0	1	0	0	1
PixivForMuzei	0	8	0	0	8
PortAuthority	1	19	1	0	19
ProExpanse	0	2	0	0	2
Rbb	0	1	0	0	1
SMSSync	0	1	0	0	1
TowerCollector	0	1	0	0	1
TVHGuide	0	2	0	0	2
Automatic Total	19	81	1	1	98
Total	142	154	27	16	327